

In re Patent Application of:  
**VINSON ET AL.**  
Serial No. 10/696,918  
Filing Date: October 30, 2003

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REMARKS

Claims 10, 15, 16 and 18 remain in this application. Claims 1-9, 11-14, 17, 19-38 have been cancelled. Claim 10 has been amended.

Applicants thank the Examiner for the detailed study of the application and prior art. Applicants have cancelled independent claim 28 directed to the decoupling capacitor assembly and amended independent 10 directed to the combination of at least one integrated circuit chip module that includes the substrate, at least one integrated circuit die and decoupling capacitor assemblies.

Applicants have amended claim 10 to place the case in condition for allowance.

Applicants note the rejection of claim 10 and other claims as anticipated by U.S. Patent No. 6,005,778 to Spielberg et al. (hereinafter "Spielberger") or obvious over Spielberg in view of U.S. Patent No. 5,140,496 to Heinks et al. (hereinafter "Heinks"). The Examiner states that Spielberg discloses the integrated circuit die as a "chip" 40c mounted on a substrate indicated at 14 in FIG. 1.

Applicants have amended claim 10 to distinguish between the claimed invention and Spielberg and Heinks since in the claimed invention as now presented in this Amendment, the at least one integrated circuit die is mounted directly on the substrate. The substrate bonding pads are positioned directly on the substrate and the decoupling capacitor assemblies are mounted in series directly on the at least one integrated circuit die. Each decoupling capacitor assembly is formed as a capacitor carrier secured directly onto the

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exposed surface of the at least one integrated circuit die with any thin film metallization layer formed directly on the capacitor carrier. A conductive adhesive layer is applied directly onto the thin film metallization layer and a decoupling capacitor is secured directly onto the thin film metallization layer by the conductive adhesive layer.

Spielberger, on the other hand, is specifically directed to a packaging arrangement using a chip stacking arrangement by having two die 20c and 40c or 20b and 40b stacked vertically with each other. Thus, the referenced die 40c is not mounted directly on the substrate 14b, but instead is mounted directly on a spacer 50a as shown in FIG. 5. The spacer 50a is mounted directly onto another chip 20b or 20c, which in turn, is mounted directly on the substrate. Thus, Spielberger is opposite from the claimed invention, since in the instant claimed invention presented in this Amendment, the integrated circuit die is mounted directly on the substrate and the capacitor carrier is secured directly onto the exposed surface of the integrated circuit die with the other claimed combination of features.

Accordingly, the claimed invention presented with the amended claim 10 is opposite because it cannot form a "chip stacking arrangement," which is the entire purpose of Spielberger as noted in the Summary of the Invention in Spielberger in column 1 starting at line 45. It must have the first and second die with the use of conductive spacers, if necessary to stack chips. This is opposite from the claimed invention using an integrated circuit die mounted directly on the substrate. As to Heinks, it teaches a decoupling capacitor mounted directly on an integrated circuit, but does

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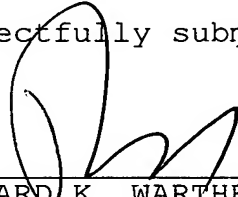
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not suggest the claimed structure singularly or in combination with Spielberg.

Applicants contend that the present case is in condition for allowance and respectfully requests that the Examiner issue a Notice of Allowance and Issue Fee Due.

If the Examiner has any questions or suggestions for placing this case in condition for allowance, the undersigned attorney would appreciate a telephone call.

Respectfully submitted,

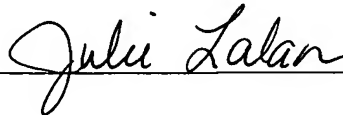


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I hereby certify that this correspondence is being deposited with the United States Postal Service as first class mail in an envelope addressed to: **MAIL STOP AMENDMENT, COMMISSIONER FOR PATENTS, P.O. BOX 1450, ALEXANDRIA, VA 22313-1450**, on this 19<sup>th</sup> day of July, 2006.



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